INDEX TO VOLUME 54

ACKERMAN, RALPH A., 316
Activity and Thermoregulation of the Antelope Ground Squirrel *Ammospermophilus leucurus* in Winter and Summer, 215
ADAMS, STEVEN R., 74
Anaerobic Metabolism in a Lizard (*Anolis bonairensis*) under Natural Conditions, 237
AR, AMOS, 14, 22
ARIELI, RAN, 14, 22
ARLIAN, LARRY G., 393

BARKER, J. S. F., 28
BARTHOLOMEW, GEORGE A., 62, 81, 215
BENNETT, ALBERT F., 146, 155, 237
BERNSTEIN, M. H., 308
BHASKARAN, GOVINDAN, 260
Blood Capillary Density in Heart and Skeletal Muscles of the Fossorial Mole Rat, 22
Blood Viscosity of Two Mammalian Hibernators: *Spermophilus tridecemlineatus* and *Tamias striatus*, 122
BOARDMAN, THOMAS J., 165
BRAMHAM, CLIVE R., 253
BUETOW, D. E., 390
BURGGREN, W. W., 325

CAREY, F. G., 334
CASEY, TIMOTHY M., 362
CASTELLINI, M. A., 242
CHAPPELL, MARK A., 81, 215
Characterization of Metabolic Carbon Flow in Hepatocytes Isolated from Thermally Acclimated Killifish *Fundulus heteroclitus*, 379
COHEN, ALLEN C., 179
COLLINS, BRIAN G., 1
CORNELL, L. H., 55
CROMPTON, A. W., 463
CRONIN, THOMAS W., 487
CUMMINGS, E. G., 230

DAWSON, T. J., 285
DAWSON, WILLIAM R., 146, 155
DEATON, LEWIS E., 109
DEAVERS, DANIEL R., 94
DICKSON, KATHRYN A., 470
Dietary Sugars, Hemolymph Trehalose Levels, and Supernumerary Molting of *Manduca sexta* Larvae, 260
Digestive Enzymes of Fungus-feeding Beetles, 137
DONHAM, R. S., 372
DUNSON, WILLIAM A., 253

Effect of Anoxia on the Adenylates and the Energy Charge in the Sea Anemone, *Bunodosoma cavernata* (Bosc), 415
Effect of Temperature on the Equilibrium Body Water Mass in the Mite *Dermatophagoides farinae*, 393
Effects of Day Length, Temperature, and Green Food on Testicular Development in a Desert Pocket Mouse *Perognathus formosus*, 62
Effects of Nestling Age and Burrow Depth on CO_2 and O_2 Concentrations in the Burrows of Bank Swallows (*Riparia riparia*), 132
ELLINGTON, W. ROSS, 415
Energetic Cost of Locomotion of Some "Primitive" Mammals, 463
Energetics and Thermoregulation of *Malacosoma americanum* (Lepidoptera: Lasiocampidae) during Hovering Flight, 362
Energy Production during Swimming in the Adductor Muscle of the Bivalve *Lima hians:* Comparison with the Data from other Bivalve Mollusks, 400
Evaporative Water Loss and Oxygen Consumption of Three Small Lizards from the Florida Keys: *Sphaerodactylus cinereus, S. notatus,* and *Anolis sagrei*, 253

FANNING, F. D., 285
FARNER, D. S., 372
FENG, ALBERT S., 390, 487
Field and Laboratory Studies of the Thermal Relations of Hatchling Western Gulls, 155
Flow Properties of Expiration and Inspiration in a Trained Bottle-nosed Porpoise, 55

GÄDE, GERD, 400
GLEESON, T. T., 237, 423
Glycolytic Enzyme Activities in Tissues of Marine and Terrestrial Mammals, 242
GORMAN, G. C., 237
GRAHAM, JEFFREY B., 470

HAINSWORTH, F. R., 452
HARLOW, HENRY J., 267, 276
Heart Rate Responses of the Mole Rat (*Spalax ehrenbergi*) in Hypercapnic, Hypoxic, and Cold Conditions, 14
HEITKAMP, D. H., 230
HELLER, H. C., 297
HUDSON, JACK W., 94
HUI, CLIFFORD A., 430

Induction of Testicular Development in House Sparrows, *Passer domesticus,* and White-crowned Sparrows, *Zonotrichia leucophrys gambelii,* with Very Long Days and Continuous Light, 372
Influence of Mucus on the Diffusion of Water across Fish Epidermis, The, 224
Interspecific Competition between *Drosophila melanogaster* and *Drosophila simulans:* Effects of Adult Density, Species Frequency, Light, and Dietary Phosphorus-32 on Fecundity, 28
Ion Regulation in Freshwater and Brackish Water Bivalve Mollusks, 109

JOHNSON, M. W., 137
JONES, DAVY, 260
JONES, GRACE, 260

KANWISHER, J. W., 334
KENAGY, G. J., 62
KOOYMAN, G. L., 55, 242
KRAMER, DONALD L., 189
KUKOR, J. J., 137

LOVERIDGE, J. P., 203

MACLEAN, GRAEME S., 122
MCCLURE, MARTHA, 189
MCMAHON, B. R., 325
MARCH, RALPH B., 179
MARSH, RICHARD L., 132
MARTIN, J. S., 137
MARTIN, M. M., 137
Metabolic Adaptations to Prolonged Food Deprivation by the American Badger *Taxidea taxus,* 276
Metabolism and Oxygen Transport in the Innkeeper *Urechis caupo,* 44
Metabolism and Water Balance of Active and Cocooned African Bullfrogs *Pyxicephalus adspersus,* 203
MOERLAND, T. S., 379
MOORE, M. C., 372
MOTH, JEFFREY J., 28
MUTH, ALLAN, 441

Nectar Intake and Water Balance for Two Species of Australian Honeyeater, *Lichmera indistincta* and *Acanthorhynchus superciliosis,* 1
New Books in Physiological Zoology
G. FLEISCHER, *Evolutionary Principles of the Mammalian Middle Ear,* 487
R. L. FOSTER, *The Nature of Enzymology,* 390
HANSJOCHEM AUTRUM, *Vision in Invertebrates: Invertebrate Photoreceptors,* 487
K. MIAMI and H. MATSUOKA, *Thalamocortical Organization of the Auditory System in the Cat Studied by Retrograde Axonal Transport of Horseradish Peroxidase,* 390

ORON, U., 463
O'TOOLE, T. E., 137
Oxygen Consumption by Sea Turtle (*Chelonia, Caretta*) Eggs during Development, 316
Oxygen Uptake during Environmental Temperature Change in Hermit Crabs: Adaptation to Subtidal, Intertidal, and Supratidal Habitats, 325

PACKARD, GARY C., 165
PACKARD, MARY J., 165
PAGANELLI, C. V., 195
Patterns and Possible Significance of Water Exchange by Flexible-shelled Eggs of Painted Turtles (*Chrysemys picta*), 165
Physiological Thermoregulation in Heat-stressed Birds: Consequences of Body Size, 345
Physiological Thermoregulation in the Albacore *Thunnus alalunga,* 470
PINTO, JOHN D., 179
Preferred Body Temperature, Aerobic Scope, and Activity Capacity in the Monitor Lizard, *Varanus salvator,* 423
PRITCHARD, AUSTIN, 44
Proportional Control for Daily Energy Regulation in Hummingbirds, 452
PUTNAM, R. W., 146

Quantified Aspects of Pallial Fluid and Its Affect on the Duration of Locomotor Activity in the Terrestrial Gastropod *Triodopsis albolabris,* 407

ROBERTSON, STANLEY L., 74

SAMANIEGO, F. C., 308
Seawater Consumption and Water Flux in the Common Dolphin *Delphinus delphis,* 430
Shell Resistance and Evaporative Water Loss from Bird Eggs: Effects of Wind Speed and Egg Size, 195
SHEPHARD, K. L., 224
SIDELL, B. D., 379
SMITH, E. NORBERT, 74
SMITH, LAURENS H., JR., 407
SNAPP, B. D., 297
SOMERO, G. N., 242
SPOTILA, J. R., 195
Standard Operative Temperatures and Thermal Energetics of the Antelope Ground Squirrel *Ammospermophilus leucurus,* 81
Suppression of Metabolism during Hibernation in Ground Squirrels (*Citellus lateralis*), 297

TARDIFF, M. F., 452
TAYLOR, C. R., 463
TEAL, J. M., 334

Temperature Regulation in Two Rodents (*Clethrionomys gapperi* and *Peromyscus leucopus*) and a Shrew (*Blarina brevicauda*) Inhabiting the Same Environment, 94
Thermal and Energetic Problems of Semiaquatic Mammals: A Study of the Australian Water Rat, including Comparisons with the Platypus, 285
Thermal Environment and Tolerance of Embryonic Western Gulls, 146
Thermoregulation of the Spiny Soft-shelled Turtle *Trionyx spinifer*, 74
Torpor and Other Physiological Adaptations of the Badger (*Taxidea taxus*) to Cold Environments, 267
Transit Cost of Aerial Respiration in the Catfish *Corydoras aeneus* (Callichthyidae), The, 189

Ventilation and Acid-Base Status during Thermal Panting in Pigeons (*Columba livia*), 308
Ventilatory Sniffing in the Albino Rat, 230
VESELICA, M. MICHAEL, 393
Visceral Temperatures of Mackerel Sharks (*Lamnidae*), The, 334

Water Relations of Desert Iguana (*Dipsosaurus dorsalis*) Eggs, 441
Water Relations of the Desert Blister Beetle *Cysteodemus armatus* (Leconte) (Coleoptera; Meloidae), 179
WEATHERS, WESLEY W., 345
WEINHEIMER, C. J., 195
WHITE, FRED N., 44
WICKLER, STEVEN J., 132
WITHERS, P. C., 203
WOLF, L. L., 452